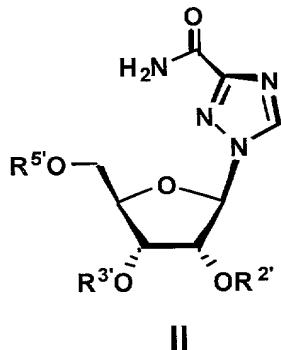


CLAIMS

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1. A compound represented by formula II



wherein at least one of R^2 , R^3 or R^5 is H, $R^{20}-(W)_x-CO-$, $R^{20}-(W)_x-CS-$ or $R^{20}-(W)_x-PO(OH) -$; and wherein at least one of R^2 , R^3 or R^5 is not H;
 wherein R^{20} is alkyl, H, alkanoyl, cycloalkyl, aryl, heterocyclic, $NR^{21}R^{22}$, alkenyl, or alkynyl;

15 or is alkyl, alkanoyl alkenyl or alkynyl substituted by halo, phenyl, cycloalkyl, $NR^{21}R^{22}$, hydroxy, alkoxy;
 or is aryl substituted by phenyl halo, CN, NO_2 , OH, R^{28} , OR^{28} , CF_3 , SH
 $SR^{21}, SOR^{21}, SO_2R^{21}$; $NR^{21}R^{22}$, CO_2H , CO_2^- , OR^{21} , O^-M^+ or S^-M^+ ;
 20 wherein M^+ is an alkali metal cation;

or R^{20} is- $-(CHR^{21})_e-(CH_2)_f-CO-OR^{22}$,

25 $-(CHR^{21})_e-(CH_2)_f-OR^{22}$, or $-(CHR^{21})_e-(CH_2)_f-NR^{21}R^{22}$

W is O, NR^{28} or S;

R^{21} is H, alkyl, alkanoyl, Y or aryl or is alkyl, alkanoyl or aryl substituted by halo, phenyl, CN, NO_2 , OH, CO_2H or alkoxy; and R^{22} is H, alkyl or aryl or is alkyl or aryl substituted by phenyl; halo, CN, NO_2 , OH, CO_2H or alkoxy;

5 or R^{21} and R^{22} taken together with N and one of CHR^{21} , NR^{21} , O, S, SO or SO_2 form a five-, six- or seven- membered ring;

R^{27} is H, OR^{21} , $NR^{21}R^{22}$, $R^{20}-(W)_x-CO-$, $R^{20}-(W)_x-CS-$, $(HO)_2PO-$ or

$R^{20}-(W)_x-PO(OH) -$ or $HO-SO_2^-$;

R^{28} is H, alkanoyl, aryl, alkyl or alkyl substituted by OH, halo or $NR^{21}R^{22}$;

10

$e = 0$ to 6, $f = 0$ to 10, $t = 0$ to 100; $s = 0$ to 6000; $r = 1$ to 5000; and $x = 0$ or 1;

or a pharmaceutically acceptable salt thereof.

15 2. A pharmaceutical composition of a compound of claim 1 or a pharmaceutically acceptable salt thereof together with a pharmaceutically acceptable carrier.

20 3. A method of using a compound represented by formula II of claim 1 for treating a susceptible viral infection , wherein the method comprises a therapeutically effective amount of a ribavirin derivative of formula II of claim 1 or a pharmaceutically acceptable salt thereof.

25

4. A method of using a compound represented by formula II of claim 1 in association with interferon alpha for treating a chronic hepatitis C infection , wherein the method comprises a therapeutically effective amount of a ribavirin derivative of formula II of claim 1 or a pharmaceutically acceptable salt thereof and a therapeutically effective amount of an interferon alpha.

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5. The method of claim 4, wherein the interferon-alpha is selected from interferon alpha-2a, interferon alpha-2b, a consensus interferon, a purified interferon alpha product or a pegylated interferon-alpha-2a, pegylated interferon-alpha-2b, pegylated consensus interferon.

6. The method of claim 4, wherein the interferon-alpha administered is a pegylated interferon alpha-2b and the amount of pegylated interferon-alpha-2b administered is from 0.5 to 2.0 micrograms/kilogram per week on a weekly, TIW, QOD or daily basis,

7. The method of claim 4, wherein the interferon-alpha administered is a pegylated interferon alpha-2a and the amount of pegylated interferon alpha-2a administered is from 20 to 250 micrograms per week on a weekly, TIW, QOD or daily basis.

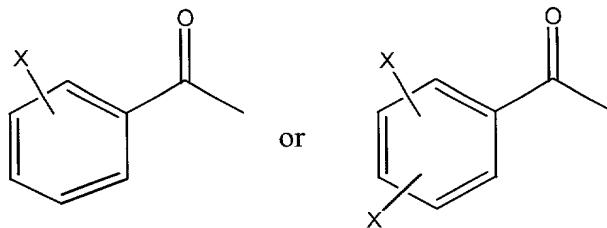
9 The compound of formula II of claim 1, wherein $R^{2'} = R^{3'} = H$.

10 The compound of formula II of claim 1 wherein $R^{2'} = R^{5'} = H$,

11. The compound of formula II of claim 1 wherein $R^{3'} = R^{5'} = H$.

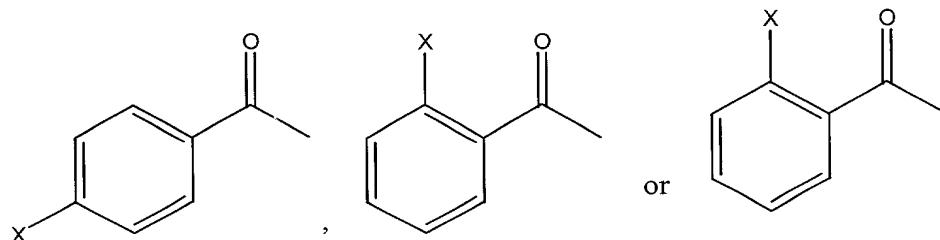
12. The compound of formula II of claim 1, wherein $R^{5'}$ is one of

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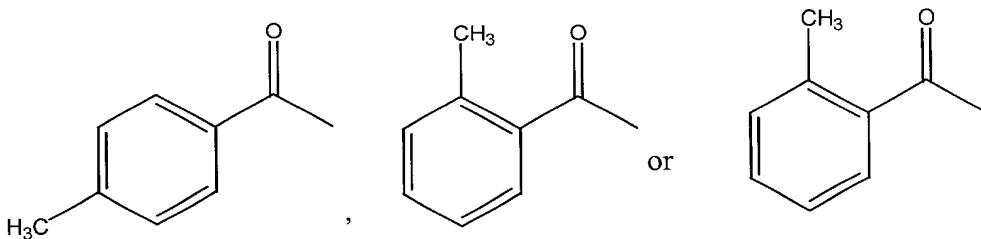
wherein X is independently OH, alkanoyl, amino, alkylamino, dialkylamino, alkanoylamino, hydroxyalkyl, alkoxy, alkyl, CN, NO₂, halo, or alkyl substituted by OH, alkanoyl, amino, alkylamino, dialkylamino, alkanoylamino, hydroxyalkyl, alkoxy, CN, NO₂, or halo.

13 The compound of formula II of claim 1, wherein R⁵ is

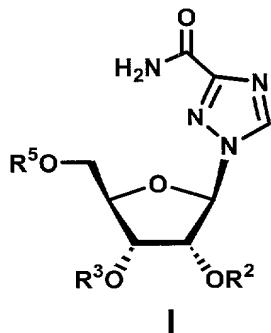


wherein X is OH, COCH₃, OCOCH₃, NO₂, NH₂, [CH₃]₂N, NHCOCH₃, CH₂OH, CH₃, OCH₃, F, Br or Cl.

14 The compound of claim 1, wherein R⁵ is



5 15. A method of treating patients having chronic hepatitis C infection comprising
10 administering a therapeutically effective amount of a ribavirin derivative of formula I and
a therapeutically effective amount of interferon-alpha for a time period sufficient to
eradicate detectable HCV-RNA at the end of said period of administering and to have
no detectable HCV-RNA for at least 24 weeks after the end of said period of
administering, and wherein the ribavirin derivative is represented by formula I:



wherein at least one of R^2 , R^3 or R^5 is H, $R^6-(W)_x-CO-$, $R^6-(W)_x-CS-(HO)_2PO-$, $R^6-(W)_x-PO(OH)-$ or $HO-SO_2^-$ and wherein at least one of R^2 , R^3 or R^5 is not H;
 wherein R^6 is H, alkyl, alkanoyl, cycloalkyl, heterocyclic, aryl, $NR^{7a}R^{7b}$, alkenyl, or alkynyl; or is alkyl, alkanoyl, alkenyl or alkynyl substituted by halo, phenyl, cycloalkyl, $NR^{7a}R^{7b}$, hydroxy or alkoxy;
 or R^6 is aryl substituted by phenyl, halo, CN, NO_2 , OH, R^{18} , OR^{18} , CF_3 , SH SR^{7a} , SOR^{7a} , SO_2R^{7a} ; $NR^{7a}R^{7b}$, CO_2H , $CO_2^- M^+$, $O^- M^+$, OR^{7a} or $S^- M^+$;
 wherein M^+ is an alkali metal cation;
 or R^6 is $-(CHR^{7a})_e-(CH_2)_f-CO-OR^{7b}$,
 $-(CHR^{7a})_e-(CH_2)_f-OR^{7b}$, or $-(CHR^{7a})_e-(CH_2)_f-NR^{7a}R^{7b}$

15 W is O, NR^{18} or S;

R^{7a} is H, alkyl, alkanoyl, aryl or is alkyl, alkanoyl or aryl substituted by halo phenyl CN, NO_2 , OH, CO_2H or alkoxy; and R^{7b} is H, alkyl or aryl or is alkyl or aryl substituted by halo, CN, NO_2 , CO_2H , OH or alkoxy;
 20 or R^{7a} and R^{7b} taken together with N and one of CHR^{7a} , NR^{7a} , O, S, SO or SO_2 form a five-, six- or seven- membered ring;
 R^{17} is H, OR^{7a} , $NR^{7a}R^{7b}$, $R^6-(W)_x-CO-$, $R^6-(W)_x-CS-$, $(HO)_2PO-$, $R^6-(W)_x-PO(OH)-$, or $HO-SO_2^-$;
 25 R^{18} is H, aryl, alkyl, or alkyl substituted by OH, halo, $NR^{7a}R^{7b}$, or alkanoyl;

$e = 0$ to 6, $f = 0$ to 10, and $x = 0$ or 1;

or a pharmaceutically acceptable salt thereof.

16. The method of claim 15 wherein R^5 is R^6CO wherein R^6 is aryl substituted by phenyl, halo, CN, NO_2 , OH, R^{18} , OR^{18} , CF_3 , $SH SR^{7a}$, SOR^{7a} , SO_2R^{7a} , $NR^{7a}R^{7b}$, CO_2H , $CO_2^- M^{+}$, $O^- M^+ OR^{7a}$ or $S^- M^+$ and wherein M^+ is an alkali metal cation.

5 17. The method of claim 15 wherein R^5 is R^6CO wherein R^6 is phenyl substituted by, halo, CN, NO_2 , OH, R^{18} , OR^{18} , CF_3 , $SH SR^{7a}$, SOR^{7a} , SO_2R^{7a} , $NR^{7a}R^{7b}$, CO_2H , $CO_2^- M^{+}$, $O^- M^+ OR^{7a}$ or $S^- M^+$ and wherein M^+ is an alkali metal cation.